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INTERESTS OF THE *AMICI CURIAE*

Amici National Disability Rights Network, Kentucky Protection & Advocacy, the Brain Injury Association of America, and the Brain Injury Association of Kentucky are organizations devoted to advocating for disabled persons, particularly those who have incurred traumatic brain injury. Amici share an interest in ensuring the criminal justice system accommodates persons with traumatic brain injury by fairly considering their limitations and capacities. Descriptions of the amici are set forth in the Appendix.[1]

INTRODUCTION

Five years old, running across the kitchen floor of a friend's home, Jeffrey Leonard slipped on the linoleum floor and slid across the room, striking his head against the edge of a refrigerator. Sixth Circuit J.A. 516, 548. The blow fractured the child's skull, and opened a gash in his head that bled profusely. *Id.* at 548-49. The child was taken to the emergency room, where the wound was sutured. *Ibid.* No attempt was made, however, to put the portion of the child's skull displaced by the impact back to its normal position. *Id.* at 549. No imaging study was done to determine whether the injury caused a subdural hematoma – bleeding underneath the connective tissue that lines the inside of the skull – which could cause brain damage. *Id.* at 550-51; *see also Slaughter v. Parker*, 450 F.3d 224, 248 (6th Cir. 2006) [hereinafter *Slaughter II*].

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[1] Pursuant to Rule 37.6, amici affirm that no counsel for a party authored this brief in whole or in part and that no person other than *amici* and their counsel made a monetary contribution to its preparation or submission. The parties' letters consenting to the filing of this brief have been filed with the Clerk.

As an adult, Jeffrey Leonard still bears a visible indentation of his fractured skull. Yet trial counsel "made no effort to obtain an independent psychological evaluation" of his client. *Slaughter II*, 450 F.3d at 234. The only mental health expert to testify at the trial – a state psychologist appointed by the trial court to perform a competency evaluation (*Id.*, 450 F.3d at 229) – conducted no neuropsychological testing. *Slaughter v. Parker*, 187 F. Supp. 2d 755, 840 (W.D. Ky. 2001) [hereinafter *Slaughter I*], *rev'd*, *Slaughter II*, 450 F.3d 224; Sixth Circuit J.A. 316-17, 481-82. And, with respect to Mr. Leonard's childhood injury, the state psychologist testified only that Mr. Leonard "did volunteer that he had once been hit on the head once in some sort of a physical altercation and had [l]ost consciousness for some period of time." Sixth Circuit J.A. 326.

The jury that sentenced Jeffrey Leonard to death had no reason to believe that beyond the visible scar, this childhood injury had lifelong implications. Subsequently, Dr. Eric Engum, a clinical psychologist, administered a battery of neuropsychological tests and diagnosed Jeffrey Leonard with cognitive deficits resulting from a traumatic brain injury. *Slaughter I*, 187 F. Supp. 2d at 840; Sixth Circuit J.A. 372-73.

SUMMARY OF ARGUMENT

Traumatic brain injury (TBI) is a disability that can be accompanied by dramatic changes in cognition and functioning. Evidence of TBI is centrally relevant to assessing a defendant's personal culpability. Jurors in capital cases are likely to accord mitigating weight to evidence of TBI supported by properly presented expert testimony and appropriate diagnostic testing. Yet the lower courts, including the Sixth Circuit, have struggled to determine whether failure to introduce evidence of traumatic brain injury undermines confidence in a death

sentence. The Sixth Circuit's decision here exemplifies this confusion. Despite counsel's deficient failure to obtain and present independent expert testimony,[2] the Sixth Circuit refused to find prejudice,[3] characterizing Dr. Engum's evaluation of Mr. Leonard as "largely the same" as that presented by Dr. Johnson. *Slaughter II*, 450 F.3d at 235. Amici urge this Court to grant the Petition because the Sixth Circuit's test creates a barrier to the full consideration of mitigating evidence in a capital case, permits the undervaluing of traumatic brain injury evidence, and runs contrary to this Court's longstanding precedents.

ARGUMENT

I. TRAUMATIC BRAIN INJURY CAUSES DRAMATIC CHANGES IN COGNITION AND FUNCTIONING THAT MITIGATE A DEFENDANT'S CULPABILITY.

A. Traumatic Brain Injury Is A Serious Condition With Long-Term Consequences.

Traumatic brain injury occurs when an external event inflicts trauma on the brain. TBI can result in significant impairment of an individual's physical, cognitive and psychosocial functioning.[4]

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[2] The district court and court of appeals agreed that trial counsel's performance was deficient. *Slaughter I*, 187 F. Supp. 2d at 839-41; *Slaughter II*, 450 F.3d at 233-34.

[3] To prevail on a claim of ineffective assistance of counsel, a defendant must demonstrate "a reasonable probability that, but for counsel's unprofessional errors, the result of the proceeding would have been different. A reasonable probability is a probability sufficient to undermine confidence in the outcome." *Strickland v. Washington*, 466 U.S. 668, 694 (1984).

[4] *See* National Institutes of Health, Consensus Development Panel, *Rehabilitation of Persons with Traumatic Brain Injury*, 282 J. Amer. Med. Ass'n 974, 974 (1999) [hereinafter NIH].

The impact of TBI is rarely confined to a specific set of symptoms, clearly delineated impairments, or a disability that only affects one part of a person's life. Instead, "the consequences of TBI often influence human functions along a continuum from altered physiological functions of cells through neurological and psychological impairments, to medical problems and disabilities that affect the individual with TBI, as well as the family, friends, community, and society in general."[5] In many cases, the consequences of TBI endure throughout an individual's life, with new problems likely to occur as a result of new challenges and the aging process.[6] Problems – even following mild TBI – are persistent and can be lifelong.[7]

Pursuant to the Traumatic Brain Injury Act of 1996, Pub. L. No. 104-166, 110 Stat. 1445 (1996) (codified as amended at 42 U.S.C.A. § 280b-1b), the National Institutes of Health (NIH) published a number of consensus statements, including one on the consequences of TBI.[8] In its consensus statement, a comprehensive compilation of decades of research, the NIH broke down the categories of consequences as follows:

Neurological consequences: "The neurological consequences of TBI are many and complex, occurring throughout the neural axis. Any sensory, motor and autonomic

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[5] *Id.* at 976; *see also* Clark Watts, *Brain-injured Patients, in Legal Medicine* 412, 413 (5th ed. 2001) ("Rarely the [brain-injured] patient has a single symptom; more often there is a constellation of symptoms.").

[6] NIH, *supra* note 4, at 976.

[7] *See, e.g.*, Carol A. Hawley, *Reported Problems and Their Resolution Following Mild, Moderate and Severe Traumatic Brain Injury Amongst Children and Adolescents in the UK*, 17 Brain Inj. 105 (2003); Jean A. Langlois et al., *The Epidemiology and Impact of Traumatic Brain Injury*, 21 J. Head Trauma Rehab. 375, 376 (2006).

[8] NIH, *supra* note 4, at 976.

function may be compromised. Most of these complications are apparent within the first days or months following injury, depending on the severity of the initial trauma. Some long-term sequelae include a variety of movement disorders, seizures, headaches, ambient visual deficits, and sleep disorders."[9]

Cognitive consequences: "The cognitive consequences of TBI are similarly broad. All of these consequences can occur singly or in combinations and are variable in terms of their effects on individuals; furthermore, they change in severity and presentation over time. In combination, they produce a myriad of functional problems. Some of the most persistent problems include memory impairment and difficulties in attention and concentration. Deficits in language use and visual perception are common, but often unrecognized. Frontal lobe functions, such as the executive skills of problem solving, abstract reasoning, insight, judgment, planning, information processing, and organization, are vulnerable to TBI."[10]

Behavioral deficits: "Common behavioral deficits include decreased ability to initiate responses, verbal and physical aggression, agitation, learning difficulties, shallow self-awareness, altered sexual functioning, impulsivity, and social disinhibition. Mood disorders, personality changes, altered emotional control, depression, and anxiety are also prevalent after TBI."[11]

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[9] *Ibid.*

[10] *Ibid. See also* Janiece Lord-Maes & John E. Obrzut, *Neuropsychological Consequences of Traumatic Brain Injury in Children and Adolescents*, 29 J. Learning Disabilities 609, 615 (1996) (listing a variety of neuropsychological deficits, including attentional dysfunction, memory impairment, language impairment, auditory processing deficits, and evidence of frontal lobe dysfunction as commonly reported in individuals with TBI).

[11] NIH, *supra* note 4, at 976.

Social consequences: "Social consequences of mild, moderate, and severe TBI are many and serious, including increased risk of suicide, divorce, chronic unemployment, economic strain, and substance abuse. . . . As individuals with TBI attempt to resume their usual daily activities, the environment places increasing demands on them, uncovering additional psychosocial consequences."[12]

Although traumatic brain injuries can have permanent and far-reaching effects on an individual, rehabilitative interventions with brain-injured individuals can achieve substantial success. Studies have demonstrated that even very late assessment and intervention that takes into account the nature of injury and developmental stage at the time of the traumatic brain injury can positively affect functioning and quality of life.[13] With treatment, even severe traumatic brain injury can result in a good recovery for a patient.[14] Although TBI victims who do not receive early rehabilitation services are at greater risk of developing a range of disorders (e.g., severe depression and anxiety, substance abuse disorders, and difficulty controlling anger), post-acute TBI rehabilitation programs provided even years after the injury can successfully treat these later-developing problems.[15]

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[12] *Id.* at 976-77.

[13] *See, e.g.*, Lisa A. Brenner et al., *The Long-term Impact and Rehabilitation of Pediatric Traumatic Brain Injury: A 50-Year Follow-Up Case Study*, 22 J. Head Trauma Rehab. 56, 58-63 (2007) (documenting the successful rehabilitative intervention with a fifty-six year old man who suffered a childhood TBI at age five and received no medical treatment besides a brief post-injury hospital visit).

[14] *See* Ilmari Asikainen, Markku Kaste & Seppo Sarna, *Predicting Late Outcome for Patients with Traumatic Brain Injury Referred to a Rehabilitation Programme: A Study of 508 Finnish Patients 5 Years or More After Injury*, 12 Brain Inj. 95, 105 (1998).

[15] Centers for Disease Control and Prevention, Traumatic Brain Injury (TBI) in Prisons and Jails: An Unrecognized Problem, http://

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B. Long-Term Effects Of A Traumatic Brain Injury In Childhood Can Be Particularly Devastating, Especially For Children Who, Like Petitioner, Come From Socially Disadvantaged Families.

Because of the brain's explosive rate of development and organization in a child's first years, childhood brain injuries can have extraordinary and enduring effects. That a child's brain is still developing increases its vulnerability to external harms and means children can be more vulnerable to the impact of TBI than adults.[16] One study has shown that children who, like Petitioner, sustained brain injuries at age seven or younger had fewer good recoveries than patients ranging in age from eight to forty.[17] Long-term follow-up of children with TBI indicates that problems persist and may even worsen over time, depending on the nature and severity of the injury as well as developmental and environmental factors.[18]

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www.cdc.gov/ncipc/tbi/FactSheets/Prisoner_TBI_Prof.pdf (last visited Apr. 30, 2007).

[16] *See* Vicki Anderson & Cathy Catroppa, *Advances in Postacute Rehabilitation After Childhood-Acquired Brain Injury*, 85 Am. J. Phys. Med. Rehab. 767, 768 (2006) ("[W]hen skills are undeveloped or immature at the time of injury, resultant deficits may be more global and devastating for children."); Vicki Anderson et al., *Understanding Predictors of Functional Recovery and Outcome 30 Months Following Early Childhood Head Injury*, 20 Neuropsychology 42, 55 (2006) ("[C]hildren sustaining injuries in early childhood exhibit deficits similar to, if not persistent than, those seen in older children and adults, providing little support for the presence of functional plasticity in the developing brain.").

[17] Asikainen et al., *supra* note 14, at 104.

[18] Anderson & Catroppa, *supra* note 16, at 768; *see also* Harry Klonoff et al., *Outcome of Head Injuries From Childhood to Adulthood: A Twenty-Three Year Follow-up Study, in Traumatic Head Injury in Children* 219, 229-31 (1995) (documenting the enduring symptoms of pediatric TBI, even after mild TBI).

A brain injury suffered early in life can disrupt a child's ability to acquire skills and competencies later in life. The nature and degree of the resulting deficits are correlated with the age when the brain injury occurred. Thus, a child injured at the end of his preschool years (between ages three and six) is most likely to have difficulty with higher level thinking abilities called executive functions: capacities such as initiation, working memory, planning, organization, self-monitoring, and judgment.[19]

A child's physical recovery from TBI can create the expectation of adequate cognitive and behavioral functioning. However, a normal physical appearance can mask underlying cognitive deficits.[20] Poor social functioning and persistent emotive and behavioral disturbances are particularly prevalent among individuals who suffered childhood TBI, even among those with no serious long-term physical functioning deficits.[21] These problems were similar across children with mild, moderate and severe TBI, and did not resolve over time.[22]

Children who come from socially disadvantaged families, like Petitioner,[23] can experience poorer outcomes in recovery from TBI than children from more affluent

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[19] Brenner et al., *supra* note 13, at 57.

[20] *See* Lord-Maes & Obrzut, *supra* note 10, at 609.

[21] *See* Rafaella Cattelani et al., *Traumatic Brain Injury in Childhood: Intellectual, Behavioural and Social Outcome into Adulthood*, 12 Brain Inj. 283 (1998).

[22] Hawley, *supra* note 7, at 125.

[23] *See Slaughter I*, 187 F. Supp. 2d at 775-76 (detailing Petitioner's impoverished childhood and recounting testimony of Petitioner's mother that family "lacked the money to pay for follow-up medical treatment" for Petitioner's childhood injury); *Slaughter II*, 450 F.3d at 235 (noting evidence that "Slaughter was abandoned by his father, abused by his mother and step-father, and frequently left in charge of his siblings.").

backgrounds.[24] In one study, family environment (measured by variables reflecting socioeconomic status, family functioning, family stressors and resources) accounted for 25% of the variance in the level of outcome, as compared to the severity of the TBI which accounted for 20% of the variance.[25] The study suggests that injury-related variables are important influences on the rate of recovery during the first year after a TBI, but that the eventual level of cognitive and behavioral functioning attained depends as much, if not more, on environmental factors.[26]

C. The Behavioral And Cognitive Disturbances That Result From Traumatic Brain Injury May Lessen An Individual's Criminal Culpability.

Personality change is a relatively common complication of brain trauma in children that can frequently result in behavioral problems in adulthood.[27] The American Psychiatric Association describes five major subtypes of personality change due to TBI: affective lability (unstable emotions), aggression, disinhibition, apathy, and paranoia.[28] Among a sample of subjects incurring TBI in

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[24] Anderson & Catroppa, *supra* note 16, at 769.

[25] Keith Owen Yeates et al., *Preinjury Family Environment as a Determinant of Recovery from Traumatic Brain Injuries in School-age Children*, 3 J. Int'l Neuropsychological Soc'y 617, 626 (1997).

[26] *Id.* at 627; *see also* Keith Owen Yeates et al., *Short- and Long-term Social Outcomes Following Pediatric Traumatic Brain Injury*, 10 J. Int'l Neuropsychological Soc'y 412, 421 (2004) (documenting the effects of family environments on social outcomes).

[27] *See* Jeffrey E. Max et al., *Predictors of Personality Change Due to Traumatic Brain Injury in Children and Adolescents Six to Twenty-four Months After Injury*, 18 J. Neuropsychiatry & Clinical Neurosciences 21, 30 (2006).

[28] *Id.* at 22 (citing American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders (4th ed., 2000)).

childhood, the labile subtype occurred in 49% of subjects, the aggressive subtype and the disinhibited subtype each occurred in 38%, apathy occurred in 14% of subjects and paranoia in 5% of subjects.[29]

Given the coexistence of these subtypes, personality changes can frequently lead to behavioral disturbances involving a loss of impulse control, spontaneous aggression, and dysphoric bipolar states.[30] These profound changes can result in destructive behavior, including criminality and substance abuse.[31]

The impairments caused by TBI are comparable in kind, if not always in degree, to those recognized in *Atkins v. Virginia*, 536 U.S. 304 (2002), as lessening a defendant's culpability. In *Atkins*, the Court identified mentally retarded individuals' "disabilities in areas of reasoning, judgment, and control of their impulses" as diminishing their moral culpability. *Id.* at 306. Recognizing that many individuals with traumatic brain injuries may have similarly lessened culpability, the American Bar

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[29] Jeffrey E. Max et al., *The Phenomenology of Personality Change Due to Traumatic Brain Injury in Children and Adolescents*, 13 J. Neuropsychiatry & Clinical Neurosciences 161, 164-65 (2001).

[30] Edward Kim, *Agitation, Aggression, and Disinhibition Syndromes After Traumatic Brain Injury*, 17 NeuroRehabilitation 297, 297 (2002); *see also* Max, *supra* note 29, at 164 (reporting, inter alia, increased aggressivity and impaired social judgment in approximately 40% of children with TBI studied); F. Gerald Moeller et al., *Psychiatric Aspects of Impulsivity*, 158 Am. J. Psychiatry 1783, 1785 (2001) ("[R]esearch has supported the idea that damage to the frontal cortex is a cause of at least some aspects of impulsivity.").

[31] *See* Wayne A. Gordon et al., *Traumatic Brain Injury Rehabilitation: State of the Science*, 85 Amer. J. Physical Med. & Rehab. 343, 372 (2006) ("[E]vidence suggests that TBI is associated with increased psychopathology, particularly in the areas of mood and anxiety disorders, and impulsive or destructive behaviors, such as aggression and substance abuse."); Ricardo E. Jorge et al., *Alcohol Misuse and Mood Disorders Following Traumatic Brain Injury*, 62 Archives Gen. Psychiatry 742 (2006).

Association urged the extension of *Atkins*'s reasoning to those who suffer "significant limitations in both their intellectual functioning and adaptive behavior" as a result of traumatic brain injury.[32] Both the American Psychological Association and the American Psychiatric Association endorsed similarly worded resolutions.[33] Embodied in these resolutions is a recognition that TBI is a disability "very similar to mental retardation in [its] impact on intellectual and adaptive functioning"[34] as well as culpability.[35]

Amici do not call for a wholesale exclusion from the death penalty for those who have suffered TBI, because the limitations brought on by TBI are varied in kind and in degree. Amici do urge judicial recognition that TBI lessens culpability to a degree commensurate with the cognitive and functioning impairments it causes.[36]

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[32] American Bar Association, Resolution 122A, *available at* http://www.abanet.org/leadership/2006/annual/onehundredtwentytwoa.doc (last visited Apr. 30, 2007).

[33] *Id.* at 3 nn. 2-3.

[34] *Id.* at 5.

[35] Ronald J. Tabak, *Executing People with Mental Disabilities: How We Can Mitigate an Aggravating Situation*, 25 St. Louis U. Pub. L. Rev. 283, 288 (2006) ("The part of the Court's reasoning in *Atkins* and *Roper* dealing with moral culpability is equally true for those seriously mentally disabled people who would be exempted from the death penalty by paragraphs one and two of the Task Force's proposal."); *see also* Christopher Slobogin, *Mental Disorder as an Exemption from the Death Penalty: The ABA-IRR Task Force Recommendations*, 54 Cath. U. L. Rev. 1133, 1137 (2005) ("People with significant mental disorder[s] at the time of the offense may often be culpable enough to deserve conviction for murder, but they are never as culpable as the consummately evil killer envisioned by the Supreme Court's death penalty jurisprudence.").

[36] The Court has recognized that mitigating evidence may vary in persuasiveness and yet still must be given meaningful consideration by the sentencing jury. *See Abdul-Kabir v. Quarterman*, 550 U.S. __, No. 05-11284, slip op. at 15 (Apr. 25, 2007) ("Cole's mitigating evidence

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II. JURIES CANNOT BE EXPECTED TO UNDERSTAND THE SIGNIFICANCE OF TRAUMATIC BRAIN INJURY WITHOUT THE ASSISTANCE OF APPROPRIATE EXPERT TESTIMONY BASED ON A COMPREHENSIVE EVALUATION THAT INCLUDES NEUROPSYCHOLOGICAL TESTING.

In this case, the jury was denied evidence that would have allowed it to understand the complex cognitive impairments caused by Jeffrey Leonard's childhood TBI. Instead, the jury heard from Dr. Johnson, a psychologist who conducted no neuropsychological testing. *Slaughter I*, 187 F. Supp. 2d at 840; Sixth Circuit J.A. 316-17, 481-82. And, to the extent he mentioned the brain injury, he did so only in a passing reference to the defendant's self-report of having been "hit on the head." Sixth Circuit J.A. 326. In view of Dr. Johnson's testimony, the jury likely concluded the defendant's being "hit on the head" was inconsequential. A jury receiving appropriate expert testimony would likely have recognized the TBI as lessening Jeffrey Leonard's culpability and imposed a sentence less than death.[37]

The mechanisms and consequences of TBI are beyond the common knowledge of the average layperson. Expert

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[which included evidence of 'possible neurological damage' and 'lack of self-control'] may not have been as persuasive as Penry's * * * [but] it was relevant to the question of Cole's moral culpability for precisely the same reason as Penry's * * * .") (citing *Penry v. Lynaugh*, 492 U.S. 302 (1989)).

[37] The American public recognizes the severity of the disabilities caused by brain injuries. Almost 70% of adults think that a brain injury is a "very serious" disability and more than nine out of ten (94%) think it is at least a "somewhat serious" disability. Harris Poll, Public Perceptions of Brain and Head Injuries (2000), www.biausa.org/Pages/harris_poll_results.html.

testimony is necessary to show a jury what cognitive or functional impairments have been caused by a brain injury.[38] TBI not only demands a "highly scientific technique for diagnosis," *Smith v. Tenet Healthsystem SL, Inc.*, 436 F.3d 879, 888 (8th Cir. 2006), but also presents complex issues of causation. *See* Fed. R. Evid. 701 advisory committee's notes (2000 amendments) ("[L]ay testimony 'results from a process of reasoning familiar in everyday life,' while expert testimony 'results from a process of reasoning which can be mastered only by specialists in the field.'").

While some critical information surrounding TBI and its effects can only be obtained from the patient, a proper evaluation should not rely solely on the patient's subjective report.[39] "Because of problems with motivation, memory, language, reduced awareness of their illness, or other neurobehavioral symptoms, patients may not always be reliable informants for past or current events."[40] Brain-injured patients often suffer from language disorders, or

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[38] *See* Richard E. Redding, *The Brain-Disordered Defendant: Neuroscience and Legal Insanity in the Twenty-First Century*, 56 Am. U. L. Rev. 51, 75 & n.158 (2006) (noting that courts generally admit expert testimony concerning frontal lobe dysfunction).

[39] *See generally* Laura A. Flashman & Thomas W. McAllister, *Lack of Awareness and Its Impact in Traumatic Brain Injury*, 17 NeuroRehabilitation 285 (2002) (discussing reasons why the brain-injured patient may be unaware of the consequences of TBI, and surveying the literature).

[40] American Academy of Clinical Neuropsychology, *Practice Guidelines for Neuropsychological Assessment and Consultation*, 21 Clinical Neuropsychologist 209, 219 (2007) [hereinafter AACN]; *see also* Redding, *supra* note 38, at 119 (many TBI victims "fail to disclose any symptoms or that they had suffered a head injury" or "tend to present an unrealistically favorable image of themselves."); *id.* at 120 ("[T]hose with FLD [frontal lobe dysfunction] often fail to report any symptoms.").

aphasias, that may render the patient unable to express herself or unable to process communication input.[41]

For these reasons, a comprehensive evaluation should include: interviews of significant others of the patient;[42] a review of available records, such as medical and school records;[43] neuroimaging studies;[44] and, most importantly, neuropsychological testing.[45] The central component of a comprehensive evaluation of brain injury is the administration of neuropsychological tests which have been determined to be internally reliable, valid as compared to other measures of brain impairment,[46] and normatively stable across varying patient populations.[47]

One widely used battery of neuropsychological tests used to determine cognitive impairment in functioning is the Halstead-Reitan Neuropsychological Battery (HRNB),

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[41] Watts, *supra* note 5, at 412-13.

[42] AACN, *supra* note 40, at 219-20.

[43] *Id.* at 218-19.

[44] *Id.* at 224-25 (citing American Psychological Association, *Official Position of the Division of Clinical Neuropsychology (APA division 40) on the Role of Neuropsychologists in Clinical Use of fMRI*, 18 Clinical Neuropsychologist 349 (2004)).

[45] *Id.* at 220-21; *see also* Redding, *supra* note 38, at 120 ("[A] competent assessment for FLD [frontal lobe dysfunction] will include a collection of past medical and behavioral history and collateral source information, a psychiatric or neurological examination, neuropsychological testing, and perhaps electroencephalography ('EEG') or neuroimaging.").

[46] Shane S. Bush et al., *Symptom Validity Testing: Practice Issues and Medical Necessity*, 20 Archives of Clinical Neuropsychology 419 (2005).

[47] AACN, *supra* note 40, at 220; *see* Lord-Maes & Obrzut, *supra* note 10, at 615 (stating that cognitive dysfunction following TBI may fail to show up on routine intellectual assessments – only neuropsychological testing will reveal many of the deficits common in individuals with TBI).

which was administered to Jeffrey Leonard by Dr. Eric Engum, an expert who testified in state postconviction proceedings. Interest in investigating brain damage in returning World War II veterans spurred development of the HRNB, which has long been recognized as a reliable and valid measure of brain impairment.[48]

Courts have recognized that proper expert testimony, prepared in accordance with the foregoing principles, is essential in proving brain damage.[49] Because Dr. Johnson conducted no neuropsychological testing whatsoever, the

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[48] Lawrence C. Hartlage, *Neuropsychological Testing of Adults: Further Considerations for Neurologists*, 16 Archives of Clinical Neuropsychology, 201, 202-05 (2001). The HRNB was relied on by courts as early as 1974. *See United States v. Bobbitt*, 48 C.M.R. 302, 303-04 & n.2 (A.F.C.M.R. 1974) (reversing conviction based in part on testimony of psychologist, having administered HRNB, that defendant suffered "cerebral dysfunction"). The HRNB has been accepted as a reliable measure by the Social Security Administration, which in 1989 recognized that "[b]road-based neuropsychological assessments using, for example, the Halstead-Reitan or the Luria-Nebraska batteries may be useful in determining brain function deficiencies, particularly in cases involving subtle findings such as may be seen in traumatic brain injury." 20 C.F.R. pt. 404, subpt. P, app. 1, § 12.00D (1989). Present regulations provide that "comprehensive neuropsychological examinations may be used to establish the existence and extent of compromise of brain function" 20 C.F.R. pt. 404, subpt. P, app. 1, §§ 12.00D; 12.00D(8) (2007).

[49] *E.g. United States v. Sandoval-Mendoza*, 472 F.3d 645, 652-56 (9th Cir. 2006) (holding that the district court improperly excluded expert testimony of neurologist and psychologist as to cognitive impairment caused by brain tumor); *see also Hutchison v. State*, 150 S.W.3d 292, 304-08 (Mo. 2004), *cert. denied sub nom. Hutchison v. Missouri*, 126 S. Ct. 72 (2005) (holding that although trial counsel obtained a mental health expert, the failure to adequately utilize the expert with respect to, inter alia, the defendant's brain damage, violated both prongs of the *Strickland* test); *State v. Coney*, 845 So. 2d 120, 131-32 (Fla. 2003) (concluding that "it is likely that a jury would have been persuaded to recommend a penalty other than death" if neuropsychological evidence had been presented about defendant's brain dysfunction).

jury had no opportunity to learn the full truth about Jeffrey Leonard's brain injury and subsequent impairments.

III. CONFUSION REGARDING THE RELEVANCE OF TRAUMATIC BRAIN INJURY TO THE QUESTION OF MORAL CULPABILITY HAS LED SOME COURTS, INCLUDING THE SIXTH CIRCUIT, TO UNDERVALUE THIS COMPELLING MITIGATING EVIDENCE.

Central to the Eighth Amendment's protection in capital cases is the opportunity for jurors to weigh mitigating evidence, enabling them to evaluate the appropriateness of imposing the death penalty. Without the chance to consider such evidence, there is an unacceptable "risk that the death penalty will be imposed in spite of factors which may call for a less severe penalty." *Lockett v. Ohio*, 438 U.S. 586, 605 (1978). *See also Brewer v. Quarterman*, 550 U.S. ___, No. 05-11287 (Apr. 25, 2007) (holding that a capital jury must be permitted to weigh all relevant mitigating evidence in its calculus of deciding whether a defendant is truly deserving of death). Evidence of TBI is particularly relevant because it affects any assessment of personal culpability, and this Court's death penalty jurisprudence has illustrated an increasing understanding that impaired brain functioning is particularly mitigating. *See Abdul-Kabir v. Quarterman*, 550 U.S. ___, No. 05-11284, slip op. at 10 (Apr. 25, 2007) (holding that "sentencing juries must be able to give meaningful consideration and effect to all mitigating evidence that might provide a basis for refusing to impose the death penalty," such as evidence of neurological damage); *Tennard v. Dretke*, 542 U.S. 274, 287 (2004) (finding that "impaired intellectual functioning is inherently mitigating"); *Wiggins v. Smith*, 539 U.S. 510, 535 (2003) (recognizing that diminished mental capacities are relevant in mitigation); *Penry v. Lynaugh*, 492 U.S.

302, 337 (1989) (noting that "virtually all of the States with death penalty statutes that list statutory mitigating factors include as a mitigating circumstance evidence that '[t]he capacity of the defendant to appreciate the criminality of his conduct or to conform his conduct to the requirements of law was substantially impaired.'"). In addition, in the recent cases of *Atkins v. Virginia*, 536 U.S. 304, 318 (2002), and *Roper v. Simmons*, 543 U.S. 551, 567 (2005), the role of brain development and mental functioning were critical to the Court's decision to exclude the mentally retarded and juveniles from the death penalty.

The jury that sentenced Jeffrey Leonard to death heard no evidence of his brain injury. Yet, the Sixth Circuit found no prejudice, creating a barrier to consideration of this compelling mitigating evidence by characterizing the postconviction testimony about Mr. Leonard's brain injury and its consequences, as "largely the same" as the trial testimony of Dr. Johnson. *Slaughter II,* 450 F.3d at 235.

The Sixth Circuit's approach is emblematic of the confusion that prevails in the lower courts as to whether counsel's deficient failure to present brain injury evidence undermines confidence in a death sentence. Some courts have held counsel's failure to present evidence of brain damage is prejudicial. *See Brewer v. Aiken*, 935 F.2d 850, 858 (7th Cir. 1991) (finding prejudice as a result of counsel's failure to present evidence of defendant's brain damage arguing that had the jury been presented with this evidence, "it might well have decided that . . . [defendant] was simply not the type of individual, because of his impaired mental capacity, who deserved the death sentence"); *Frierson v. Woodford*, 463 F.3d 982, 994 (9th Cir. 2006) (recognizing the mitigating impact that evidence of brain damage has on juries' appraisal of moral culpability); *Caro v. Woodford*, 280 F.3d 1247, 1257 (9th Cir. 2002) (concluding that evidence of defendant's brain damage

"was relevant mitigating information and should have been explained to and considered by the sentencing jury; the omission of this evidence renders [defendant's] death sentence unreliable"); *Anderson v. Sirmons*, 476 F.3d 1131, 1148 (10th Cir. 2007) (holding that evidence of a defendant's brain injury is highly relevant to the question of moral culpability and that "the absence of this readily available mitigation evidence left the jury with a 'pitifully incomplete' picture of the defendant," prejudicing the outcome of the trial).

By contrast, other courts have, like the Sixth Circuit, overlooked the importance of this compelling mitigating evidence. Insufficient understanding of the long-term consequences traumatic brain injury has on a defendant's neurological, cognitive, behavioral and social functioning has led some courts to conclude that failure to present available evidence of TBI does not undermine confidence in a sentence recommendation. *See Truesdale v. Moore*, 142 F.3d 749, 754-55 (4th Cir. 1998) (finding no prejudice for failure to present evidence of defendant's organic brain dysfunction); *Mathis v. Dretke*, 124 Fed. Appx. 865, 882 (5th Cir.), *cert. denied*, 125 S. Ct. 2940 (2005) (finding no prejudice from failure to introduce evidence of defendant's frontal lobe damage because counsel had presented evidence with the same "mitigating thrust"); *Clark v. Mitchell*, 425 F.3d 270, 287 (6th Cir. 2005) (holding that failure to introduce expert evidence about defendant's organic brain damage did not prejudice the outcome because expert testimony did not "significantly expand upon the information that was available to the jury"); *People v. Peeples*, 205 Ill. 2d 480, 546-51 (2002) (holding counsel rendered deficient performance for failing to present evidence of defendant's cognitive impairments due to brain injury, but jury might have viewed such evidence as establishing future dangerousness).

Evidence of a defendant's brain damage can radically change the picture of a case. Such evidence is necessary for a jury to possess the fullest information possible concerning the defendant's character and is essential to determining the appropriate sentence. *See Lockett*, 438 U.S. at 603. In *Abdul-Kabir*, this Court held the Eighth Amendment was violated when a jury heard mitigating evidence including evidence of "possible neurological damage," but the trial court's instructions were insufficient to permit the jury to give "meaningful consideration" to that evidence. Slip op. at 18. Jeffrey Leonard's case – where the jury did *not* hear evidence of his TBI, and the Sixth Circuit erected a barrier to "meaningful consideration" of that evidence in weighing the prejudice caused by his counsel's deficient performance – is no less offensive to the Constitution. Just as a capital jury must be permitted to "weigh such evidence in its calculus of deciding whether a defendant is truly deserving of death," *Brewer*, slip op. at 6, so must a court on collateral review weigh such evidence in determining whether counsel's deficient failure to present such evidence to the jury undermines confidence in the outcome. *Wiggins*, 539 U.S. at 536 ("[W]e evaluate the totality of the evidence – 'both that adduced at trial, *and the evidence adduced in the habeas proceeding*[s].'") (citing *Williams v. Taylor*, 529 U.S. 362, 397-98 (2000)). Hence, any judicial test that, like the Sixth Circuit's here, allows courts to sanction the exclusion of evidence of a defendant's brain injury does not comport with this Court's jurisprudence or the Eighth Amendment.

CONCLUSION

The petition for a writ of certiorari should be granted.

Respectfully submitted.

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APPENDIX: DESCRIPTIONS OF THE *AMICI CURIAE*

The National Disability Rights Network (NDRN)

The National Disability Rights Network ("NDRN") and its predecessor organization (the National Association of Protection and Advocacy Systems (NAPAS)) have appeared before the Court as *amicus curiae* in numerous cases. NDRN is the membership association of protection and advocacy ("P&A") agencies that are located in all 50 states. P&A agencies are authorized under various federal statutes to provide legal representation and related advocacy services on behalf of persons with all types of disabilities, including those with traumatic brain injury (TBI). The P&A system comprises the nation's largest provider of legally based advocacy services for persons with disabilities. Congress recognized the need to ensure that the P&A agencies have the resources to address the problems associated with TBI when it reauthorized the Traumatic Brain Injury Act as part of the Children's Health Act of 2000 (Pub. L. No. 106-310) and included the Protection and Advocacy for Individuals with Traumatic Brain Injury (PATBI) program. TBI has become a pressing concern for NDRN as the P&A agencies anticipate serving an increasing number of individuals with TBI as a result of the military war in Iraq.

Kentucky Protection and Advocacy

Kentucky Protection and Advocacy (P&A) is an independent state agency that is part of the nationwide, federally mandated protection and advocacy system for individuals with disabilities. Kentucky P&A uses legally based individual and systemic advocacy to promote and

protect the rights of individuals with disabilities, including individuals with brain injuries. In 2006, P&A appeared before the Court as an amicus curiae in *Winkelman v. Parma City School District,* No. 05-983, joining other amici including NDRN. Kentucky P&A receives a PATBI grant to provide information, referrals, and advice; individual and family advocacy; legal representation; and specific assistance in self-advocacy to Kentuckians affected by brain injury. 42 U.S.C. § 300d-53(b). In fiscal year 2006, Kentucky P&A handled information and referral calls about brain injury laws, programs and rights, provided trainings about brain injury, and represented individuals with brain injuries in a variety of lawsuits. Kentucky P&A conducted outreach to various minority populations, collaborated with the Brain Injury Association of Kentucky (BIAK), and made a presentation to the Joint Executive Committee on Veterans Organizations (JEVCO) of Kentucky. In 2006, Kentucky P&A testified to a state legislative committee and currently is commenting on Kentucky's Medicaid application for its Traumatic Brain Injury waiver program.

The Brain Injury Association of America (BIAA)

The Brain Injury Association of America (BIAA), founded in 1980, is the only nationwide advocacy organization serving and representing the 1.4 million individuals who sustain a traumatic brain injury (TBI) each year. The mission of the Brain Injury Association of America is to create a better future through brain injury prevention, research, education and advocacy. Each year, BIAA and its nationwide network of state affiliates answer 100,000 individual requests for information about TBI. In addition to its legislative advocacy efforts, BIAA participates in

litigation and has appeared before the Court as *amicus curiae* on many occasions, including joining NDRN or NAPAS as *amici curiae* in several cases.

The Brain Injury Association of Kentucky (BIAK)

Since 1986, the Brain Injury Association of Kentucky (BIAK), a chartered state affiliate of the Brain Injury Association of America (BIAA) and a member of the North American Brain Injury Society, serves Kentuckians affected by brain injury through advocacy, education, prevention, research, and support. BIAK advocates within the criminal justice system to find appropriate non-custodial placements for brain-injured defendants. BIAK has recently formed a special task force to prepare for the number of soldiers returning to Kentucky from the Iraq and Afghanistan conflicts with head injuries.